

# NESTING OF PELICANS AT MANDURAH

## I. AN ABORTIVE NESTING ATTEMPT AT CREERY ISLAND

By D. L. SERVENTY, Nedlands.

Apart from an unsubstantiated report of a former nesting station of the Pelican (*Pelicanus conspicillatus*) at the Abrolhos Is., the most southerly known breeding place of the species in Western Australia is at Pelican I., Sharks Bay. All of the known breeding colonies in this State are in marine situations and in all reproduction takes place in the winter.

It was of the greatest interest, therefore, to hear, in August 1963, of Pelicans nesting so near to Perth as Creery I., Mandurah. The first report was made to Fisheries Inspector G. C. Jeffery on August 7 by a local fisherman, Mr. M. J. Brown. Mr. Jeffery visited Creery I. on August 9. On his approach 47 Pelicans rose from the ground and 102 eggs were counted in the nests. The nests were not separately counted but the clutch was about 2-3 eggs, so there were probably between 40 and 50 nests in the colony. He revisited the area on August 16 and found only 75 eggs, with many broken eggshells. On a third visit on August 26 there were no eggs at all.

I visited the site on August 27 in the company of Messrs. Jeffery, H. B. Shugg, N. E. McLaughlan and A. G. Mathews. Creery I. is a low-lying island at the south end of the channel entrance leading into Peel Inlet. It carries groves of sheoak (*Casuarina glauca*) and paperbark (*Melaleuca raphiophylla*) but the sandy ridge on which the Pelicans nested, at the south end of the island, is grown with rushes, *Juncus pallidus* and *Scirpus nodosus*. Other plants growing within the nesting area include onion weed (*Anthericum divaricatum*), annual birdsfoot trefoil (*Lotus angustissimus*), burr medic (*Medicago denticulata*), Guildford "grass" (*Romulea rosea*), annual veld grass (*Ehrharta longiflora*) and wild geranium (*Geranium molle*). The ground was dry though much of the surrounding country was inundated as a result of the phenomenal rains of the winter.

As we neared the site 20 Pelicans flew off it. We counted 24 nests still recognisable, each 4 ft. apart, and made of pigfaec (*Carpobrotus rossii*). There were no eggs and only a few broken eggshells remained. Pelican wing quills were scattered about.

On the boat trip from Mandurah to Creery I. we were impressed by the number of Pelicans to be seen. In scattered groups, of from 3 to 50 birds, we counted about 150 individuals. Usually Pelicans vacate southern waters in the winter months but Mr. Jeffery stated that they had remained at Mandurah through the winter in recent years instead of disappearing as they used to.

It is difficult to account for the unsuccessful outcome of this attempt at nesting in the Mandurah estuary. Despite the heavy rains there was no flooding of the nesting site. The fishermen did not persecute the birds, and, on the contrary, all the local men

looked on the Pelicans with favour as now that cobbler fishing has become important the birds eat up the discarded heads of these fish. Some of the fishermen believe that a fox, seen to have swum to the island from the closely adjacent mainland, may have been responsible.

It may be that unintentional disturbance of the nesting birds by interested visitors—for the rookery is near the boat channel between Mandurah and Peel Inlet—was a contributory factor. Pelicans are not close sitters and after being disturbed from the nests it is some time before they return, allowing Ravens and other possible predators to enter the rookery and destroy eggs.

## II. SUCCESSFUL NESTING OF PELICANS IN PEEL INLET

By H. B. SHUGG, Fisheries Department, Perth.

In view of the unsuccessful outcome of the nesting attempt by Pelicans as described in the previous section, we were very surprised to learn of a successful nesting a few months later. In a letter dated January 11, 1964, Mrs. H. W. Norris forwarded to the Fisheries Department a report that Pelicans were nesting on a bank close to the southern shores of Peel Inlet, about five miles south of Creery Island.

I visited the spot on January 16, accompanied by Fauna Warden N. E. McLaughlan and Inspector R. M. Crawford. We called on Mr. A. C. Fauntleroy, a resident of the area, who gave us important information and directed us to the nesting site, where we spent two hours on a midday inspection (noon to 2 p.m.).

The nesting site was a low sandy cay which was a vegetated one of an otherwise bare chain of shallow banks lying about 800 yards offshore in Austin Bay, near Bireh Point (locally called Greenwood). At the time of our visit, the cay was separated from the shore by shallow water and exposed mud flats. In periods of low tide the whole of the intervening area is exposed and dries off. On January 16, however, the cay was an oval-shaped island no more than 2-3 ft. above high water mark and approximately 300 yards long, in an east-west direction, and 100 yards across from north to south. A large number of Pelicans were seen to leave the island on the approach of the party and quite a few immature flightless young were seen to follow them.

Specimens of the different plants on the island were collected and were subsequently identified by Mr. R. D. Royce of the State Herbarium as six halophytic species of three families. Samphire or shrubby glasswort (*Arthrocnemum halocnemoides*) was the most common. The vegetation was limited to an area of about 160 by 60 yards but much of this appeared to be dead or dying, probably as a result of the Pelicans' nesting and other activities. Green patches of vegetation were obvious on the south-west and north-east regions. There were two separate dead patches in which nesting had taken place.

Of the two sites the smaller one on the south side contained



Fig. 1.— Adults and young at Nirimba Cay, January 25, 1964.



Fig. 2.— A group of young birds, January 25.

—Photos N. E. McLaughlan



only nests with eggs and disused nests while the other large area contained nests with young birds and one with two eggs which appeared to have been recently deserted. In the first smaller area there were about 19 nests with eggs, 9 with one egg and 10 with two. Quite a few additional eggs were scattered about in disused nests and between nests. Much old nesting material was also scattered about. When handled the abandoned eggs felt hotter than those in nests in good condition, suggesting that incubation was still in progress. (On a subsequent visit about ten days later Mr. McLaughlan counted less eggs, but all the nests then appeared to have been abandoned.)

In the larger of the two nesting sites there were only a few abandoned eggs. A number of young, ranging from helpless squabs—probably one day old—to downy immatures just able to waddle, were photographed. The number of young which had taken to the water at our approach could not be enumerated as they were interspersed among 2-300 adults. We formed the opinion that there could not have been less than 20. There were five nests with very young birds in the nesting site, but counts of clutches were difficult because the older birds waddled from one nest to another. In all there were 14 young birds at the site and of these 12 were still nest bound and two very active, but not enough so to join the others in the water. One dead naked young bird was found and there were many egg fragments.

As the nestlings were approached the six parent birds would retreat in company with a large number of Silver Gulls (*Larus novae-hollandiae*). As we left, the Silver Gulls would return in a dense swarm and stand about the young Pelicans cawing and croaking. A few pecked at the dead squab, but none were seen to attack the living young although they gave the impression that they were about to do so.

The nests were shallow depressions containing dried pieces of samphire, sea rocket (*Cakile maritima*) and *Suaeda australis* as well as feathers. The samphire "stubble" was painful to walk on with bare feet.

Mr. McLaughlan, who has had considerable experience of the nesting colony at Pelican L., Sharks Bay, considered that the birds here were much less shy than those of Sharks Bay.

A duck shooter's hide had been constructed about 50 yards south-east from the No. 2 nesting site and we were informed that it had been used recently. No shells or other signs of shooting were seen and a note was left in it requesting the owner to refrain from shooting there until the Pelicans had finished nesting.

On March 13, 1964, I revisited the area in the company of Mr. A. H. Robinson and Mr. A. Burbidge. Considerable numbers of Pelicans lifted as we approached and we found evidence of continued breeding. In an extension of the large nesting area on the north side there were 13 active nests—7 with two eggs and 6 with one. The site on the south side was deserted and no eggs remained. There

were no naked or nest-bound young and though I only counted 254 birds we estimated that there were 300 in the vicinity.

#### PREVIOUS NESTING

Mr. Fauntleroy informed us that the site had been used by Pelicans in 1962 when he had himself observed six young birds there a week or two before Christmas. He believed that only a few birds had nested there that year.

In the following season, after a report from a boy named Williams that Pelicans were nesting on the cay, Mr. Fauntleroy's own lad visited the island and returned with the information that there were "hundreds of eggs all over the place." Mr. Fauntleroy said that knowing the tendency of boys to exaggerate he had not taken much notice, but had passed the report along to Mrs. H. W. Norris who forwarded it to the Department.

When questioned whether the cay had ever been differently vegetated, Mr. Fauntleroy said that he and his brother had set fire to it in 1959. It had then been covered with "weed" and had kept on smouldering for some days. He had never known vegetation on it different from what was there then and had not lit the fire for any particular purpose. The cay had never been grazed to his knowledge.

As the islet is unnamed representations were made to the Nomenclature Advisory Committee of the Lands Department that it be officially named Nirimba Cay, and the proposal was adopted. "Nirimba" is the name for Pelican in the language of the Bibbulman Aboriginal people of the South-West.

## CTENOTUS, A NEW GENERIC NAME FOR A GROUP OF AUSTRALIAN SKINKS

By G. M. STORR, Western Australian Museum, Perth.

In 1887 Boulenger placed all the lygosomatine skinks with large pentadactyl limbs and opaque lower eyelids in a subgenus, *Himulia* Gray, of *Lygosoma* Gray. In subsequent generic revisions of *Lygosoma* and allies, Malcolm Smith (1937) and Mittleman (1953) essentially adhered to Boulenger's concept of *Himulia*, though changing its name on the score of priority to *Sphenomorphus* Fitzinger. Smith treated *Sphenomorphus* as a section of *Lygosoma*, while Mittleman raised it to a full genus, comprising more than 150 forms and ranging from Africa, through southern Asia, to Australia. It was by far the largest of the genera in Mittleman's subfamily Lygosominae, and Mittleman admitted the possibility of its being polyphyletic.

The genus *Sphenomorphus*, so conceived, has numerous species in Australia, which exhibit considerable diversity in morphology and behaviour. Within it, however, there is a sharply definable group of species whose relationship to the remainder is not especially close, and which merit generic separation thus: